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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CHRISTOPH BECKE, SILVIA GERSTNER
and SIEGFRIED GRASY

Appeal 2009-005887
Application 10/816,374
Technology Center 3600

Decided: September 23, 2009

Before JENNIFER D. BAHR, STEVEN D.A. McCARTHY
and MICHAEL W. O'NEILL, *Administrative Patent Judges*.

McCARTHY, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

- 1
2 The Appellants appeal under 35 U.S.C. § 134 (2002) from the
3 Examiner's decision finally rejecting claims 9-11, 14, 17, 19 and 20 under
4 35 U.S.C. § 103(a) as being unpatentable over Bosch-Siemens (DE G 90 14

463.5, issued Feb. 7, 1991) and Yamawaki (JP P 2001-074359 A, published Mar. 23, 2001); and finally rejecting claims 12 and 21 under § 103(a) as being unpatentable over Bosch-Siemens, Yamawaki and Sasaki (JP 1-219483, publ. Sep. 1, 1989). We have jurisdiction under 35 U.S.C. § 6(b) (2002).¹

We AFFIRM.

The claims on appeal relate to compartment dividers for a box shaped body or storage compartment fitted to the door of a refrigerator. (Spec. 4, ll. 1-8). The Appellants assert that the compartment dividers help stabilize containers which are taller than the containers are wide. That is, the compartment dividers help prevent such containers from falling over if the door is opened carelessly. (Spec. 3, ll. 19-24; *see also id.* 1, l. 23 – 2, l. 4).

Independent claim 9 is typical of the claims on appeal:

9 A storage compartment for a refrigerator
10 door, the storage compartment
11 comprising:

12 a box shaped body having a first
13 longitudinal wall and a second longitudinal wall
14 and a given depth extending substantially
15 horizontally between the first and second
16 longitudinal walls with a slot extending vertically
17 within the first longitudinal wall at least along a
18 portion thereof; and

19 a compartment divider having a rider
20 extending downwardly spaced from a wall thereof
21 located adjacent to said slot for being received
22 within the slot for holding said compartment
23

¹ Page citations to Bosch-Siemens, Yamawaki and Sasaki will be to English-language translations entered in the record of the underlying application

divider attached within said box shaped body, and said compartment divider defining a chamber for holding small items and extending over more than half of the given depth, wherein the compartment divider is defined by four connected walls which do not extend to a bottom of said box shaped body to define said chamber within the connected walls for holding items therein, and an open bottom for allowing items held therein to rest on said bottom of said box shaped body.

ISSUES

The Appellants argue claims 9-11, 14, 17, 19 and 20 as a group for purposes of the rejection of those claims under § 103(a). (Br. 6-8). Claim 9 is representative of the group. *See* 37 C.F.R. § 41.37(c)(1)(vii) (2008). With respect to representative claim 9, the Examiner finds that Yamawaki, unlike Bosch-Siemens, discloses a compartment divider having an open bottom. (Ans. 4). The Examiner concludes that it would have been obvious to modify the compartment divider described by Bosch-Siemens so as to have an open bottom as taught by Yamawaki. The Examiner reasons that this proposed modification would enhance the capacity of a chamber defined in the compartment divider to store long items since the items would rest on the bottom of the boxed shape body to which the compartment divider is attached rather than on a bottom wall of the compartment divider itself. (*Id.*)

The Appellants contend that Bosch-Siemens teaches away from the proposed modification. The Appellants argue that the purpose of the chambers in Bosch-Siemens' compartment divider "is to provide a closed bin that retains smaller items in a confined receptacle . . ." (Br. 7). The Appellants further argue that the proposed modification would render the

1 chambers of Bosch-Siemens' compartment divider unsuitable for this
2 purpose because small items would fall out of the open bottom of the
3 divider. (*Id.*)

4 One issue on which this appeal turns is:

5 Have the Appellants shown that the Examiner erred in
6 concluding that the subject matter of representative claim 9
7 would have been obvious from the teachings of Bosch-Siemens
8 and Yamawaki because Bosch-Siemens teaches away from the
9 combination proposed by the Examiner as support for the
10 conclusion of obviousness?

11 With respect to the rejection of claims 12 and 21, the Examiner finds
12 that both Bosch-Siemens and Sasaki disclose compartment dividers having
13 concave profiles. (Ans. 6 and 9). The Examiner infers from this finding that
14 those of ordinary skill in the art knew to use a device having arcuate concave
15 surfaces for the purpose of securing complementary shaped articles within a
16 box-shaped body. (Ans. 9). From this knowledge, the Examiner concludes
17 that it would have been obvious to provide the compartment divider of
18 Bosch-Siemens, modified in view of Yamawaki, with concave sidewalls to
19 provide more stability to items having shapes complementary to the shapes
20 of the sidewalls. (Ans. 6). The Appellants contend that Sasaki fails to
21 disclose a compartment divider having sidewalls of concave shape bulging
22 inwardly toward a chamber defined within the sidewalls and that Yamawaki
23 teaches away from the proposed modification by disclosing outwardly
24 bulging cylindrical shapes designed to house tube shaped articles. (Br. 9).

25 Two more issues on which this appeal turns are:

1 Have the Appellants shown that the Examiner failed to
2 articulate reasoning with some rational underpinning sufficient
3 to support the conclusion that Bosch-Siemens, Yamawaki and
4 Sasaki would have provided one of ordinary skill in the art
5 reason to substitute sidewalls having concave shape bulging
6 inwardly toward a chamber defined within the sidewalls for the
7 planar sidewalls of the compartment divider of Bosch-Siemens?

8 Have the Appellants shown that the Examiner erred in
9 concluding that the subject matter of representative claims 12
10 and 21 would have been obvious from the teachings of Bosch-
11 Siemens, Yamawaki and Sasaki because Yamawaki teaches
12 away from the combination proposed by the Examiner as
13 support for the conclusion of obviousness?

14
15 FINDINGS OF FACT

16 The record supports the following findings of fact ("FF") by a
17 preponderance of the evidence.

18 1. Bosch-Siemens discloses a refrigerator door *10* and a
19 removable, trough-like receptacle container *20* arranged on the lower edge
20 of the refrigerator door *10*. (Bosch-Siemens 4, I. 22 – 5, I. 1). Figures 1-4 of
21 Bosch-Siemens depict the receptacle container *20* as being a box shaped
22 body having a first longitudinal wall, the upper edge of which is marked *24*;
23 a second longitudinal wall or end face *28*; and a bottom *29*. (*See also*
24 Bosch-Siemens 5, II. 14-16). Figure 2 of Bosch-Siemens depicts the
25 receptacle container *20* as having a given depth extending substantially
26 horizontally (that is, in a vertical direction in the view reproduced in Figure

2) between the first and second longitudinal walls. Bosch-Siemens' receptacle container 20 includes a groove or slot 25 extending vertically (that is, into the plane of the view reproduced in Figure 2 of Bosch-Siemens) within the first longitudinal wall. The groove 25 extends over the upper edge 24 of the first longitudinal wall. (Bosch-Siemens 5, ll. 6-13 and figs. 2 and 3).

2. Bosch-Siemens discloses partitioning the receptacle container 20 with one or more molded parts or compartment dividers 22 inserted into the receptacle container 20. (Bosch-Siemens 5, ll. 2-5). Each of Bosch-Siemens' molded parts 22 includes an angle bracket 23. A limb or rider 27 protrudes downwardly from the angle bracket 23 of the molded part 22 and displaceably engages in the groove 25. (Bosch-Siemens 5, ll. 6-13). Figures 2 and 3 of Bosch-Siemens depict one of the molded parts 22 as including four connected walls defining compartments or chambers 30 separated by an additional side wall across the center of the molded part 22. (*See also* Bosch-Siemens 5, ll. 16-19).

3. Figure 3 of Bosch-Siemens depicts the distance between the bottom of the molded part 22 and the bottom of the receptacle container 20 as being small in comparison with the height of either the molded part 22 or the receptacle container 20.

4. Bosch-Siemens teaches the use of the molded parts 22 to partition the space in the receptacle container 20 "[i]n order to store goods requiring refrigeration that have different outside contours such as bottles, tubes, medicine bottles or the like" (Bosch-Siemens 5, ll. 20-23).

5. Bosch-Siemens does not disclose any specific purpose for the compartments 30. (*See, e.g.,* Bosch-Siemens 4, ll. 4-6 and 5, ll. 16-19).

6. Bosch-Siemens also describes a molded part featuring a blade 31 that lies in a plane extending perpendicularly to its limb 27. (Bosch-Siemens 5, II. 16-19). Figures 2 and 4 of Bosch-Siemens depict this molded part as consisting of an angle bracket 23 and the blade. Figure 4 depicts the angle bracket 23 as substantially flat, lying along a plane at a slight angle to the plane defined by the bottom 29 of the receptacle container 20. Figure 2 depicts the profile of the angle bracket 23 is concave, defining a wide end nearer the limb 27 and curving inwardly on both sides with distance from the limb 27 down to the width of the blade 31.

7. Yamawaki discloses a small article storage container furnished in the inside of a refrigerator door. (Yamawaki 4-5, ¶ 0006).

8. Yamawaki's small article storage part includes cylindrical bodies open at the top for storing small tubes. (*Id.*). Yamawaki describes connecting at least two of the cylindrical bodies in an hourglass shape. (*Id.*) Figure 1 of Yamawaki indicates that connecting at least two of the cylindrical bodies in an hourglass shape implies positioning two cylindrical portions of the same axial length and diameter next to each other such that the distance between the axes of the cylindrical portions is less than the diameter of either of the portions. Figures 1 and 2 depict the hourglass shape as having concave inner side surfaces.

9. Yamawaki further describes continuously slitting open the bottoms of two adjacent cylindrical portions connected in an hourglass shape so that small tubes can be stored in the adjacent cylinder portions. (Yamawaki 5, ¶ 0010-11 and 7, ¶ 0017).

10. Yamawaki teaches that continuously slitting open the bottoms of the two adjacent cylindrical portions allows tubes to be stored with their

1 caps pointing upwardly and with their opposite ends resting on the bottom of
2 the storage container rather than with the caps of the tubes facing
3 downwardly. (*Id.*) Figure 2 depicts a tube stored in two adjacent cylindrical
4 portions connected in an hourglass shape as being centered on the concave
5 inner side surfaces of the hourglass shape.

6 11. Sasaki discloses a refrigerator door 4; a storage shelf 6 attached
7 to the door 4; and a guardrail 8 which slides horizontally on a guide rail 9 set
8 on a front wall 7 of the storage shelf 6. (Sasaki 2, l. 21 – 3, l. 3).

9 12. Figure 6 of Sasaki appears to show the guardrail 8 as including
10 a downwardly extending limb that engages the guide rail 9; a blade that lies
11 in a plane extending perpendicularly to the limb; and an angle bracket
12 connecting the blade and the limb. The shapes of the angle bracket and the
13 blade depicted in Figure 6 of Sasaki appear to be similar to the shapes of the
14 angle bracket 27 and the blade 31 depicted in Figures 2 and 4 of Bosch-
15 Siemens.

16
17 PRINCIPLES OF LAW

18 “[W]hen a patent claims a structure already known in the art that is
19 altered by the mere substitution of one element for another known in the
20 field, the combination must do more than yield a predictable result” to be
21 non-obvious under § 103(a). *KSR Int’l Co. v. Teleflex, Inc.*, 550 U.S. 398,
22 417 (2007). Similarly, the “mere application of a known technique to a
23 piece of prior art ready for the improvement” generally will be obvious
24 unless the application of the technique either is beyond the level of ordinary
25 skill in the art or the results of applying the known technique to the prior art
26 would not have been predictable. *Id.*

As a general rule, a reference which “teaches away” from the subject matter of a claim does not support a prima facie case that the subject matter would have been obvious. A reference teaches away from the subject matter of a claim only if “a person of ordinary skill, upon reading the reference, would be discouraged from following the path set out in the reference, or would be led in a direction divergent from the path that was taken by the applicant.” *In re Gurley*, 27 F.3d 551, 553 (Fed. Cir. 1994). Prior art does not teach away from claimed subject matter merely by disclosing a different solution to a similar problem unless the prior art also criticizes, discredits or otherwise discourages the solution claimed. *See In re Fulton*, 391 F.3d 1195, 1201 (Fed. Cir. 2004).

ANALYSIS

The Appellants contend that Bosch-Siemens teaches away from substituting a molded part or compartment divider having an open bottom for allowing items held in the chamber to rest on the bottom of the box shaped body in place of the molded parts 22 with closed bottoms described in Bosch-Siemens. More specifically, the Appellants argue that the purpose of the chambers in Bosch-Siemens’ compartment divider “is to provide a closed bin that retains smaller items in a confined receptacle . . .” and that the proposed substitution would destroy this purpose. (Br. 7). The Appellants provide no citation to identify where Bosch-Siemens might teach this purported purpose and no such teaching is apparent from Bosch-Siemens’ disclosure. (*See* FF 9). Having failed to identify where Bosch-Siemens might teach this alleged purpose for the chambers in Bosch-

Siemens' molded parts 22, the Appellants have not shown that Bosch-Siemens teaches away from the proposed combination.

Even assuming for the sake of this appeal only that one of ordinary skill in the art might have recognized that a purpose of the chambers in Bosch-Siemens' compartment divider is to provide a closed bin that retains smaller items in a confined receptacle, substituting a molded part or compartment divider having an open bottom for a molded part 22 with a closed bottom as described in Bosch-Siemens would not have destroyed this purpose. Bosch-Siemens depicts the distance between the bottom of the molded part 22 and the bottom of the receptacle container 20 as being small in comparison with the height of the receptacle container 20. (FF 3). A molded part defining a chamber identical in construction to that described in Bosch-Siemens except for having an open rather than a closed bottom would have continued to hold small items placed in the chamber so long as the heights of the items were larger than the distance between the bottom of the molded part and the bottom of the receptacle container 20.

Yamawaki teaches an apparent reason for substituting a molded part or compartment divider having an open bottom for a molded part 22 with closed bottoms described in Bosch-Siemens, namely, to allow tubes to be stored in a space-saving manner with their caps pointing upwardly and with their opposite ends resting on the bottom of the storage container. (FF 10). As the Examiner indicates (*see* Ans. 4), substituting a chamber with an open bottom for a chamber with a closed bottom would enhance the retaining capacity of the divider by lowering the center of gravity of long items such as tubes relative to the sidewalls of the chamber. Considering the teachings of Bosch-Siemens and Yamawaki as a whole, Bosch-Siemens does not teach

1 away from the substitution of a molded part or compartment divider having
2 an open bottom for a molded part 22 with closed bottoms described in
3 Bosch-Siemens.

4 Sasaki itself fails to disclose a compartment divider having sidewalls
5 of concave shape bulging inwardly toward a chamber defined within the
6 sidewalls. Nevertheless, the teachings of Bosch-Siemens, Yamawaki and
7 Sasaki would have provided one of ordinary skill in the art reason to apply
8 an inwardly concave curvature to the sidewalls of open-bottomed molded
9 parts otherwise similar in structure to the molded parts 22 of Bosch-
10 Siemens.

11 Bosch-Siemens teaches the use of the molded parts 22 to partition the
12 space in the receptacle container 20 in order to store goods requiring
13 refrigeration that have different outside contours such as bottles. (FF 4).
14 Consequently, one of ordinary skill in the art would have recognized that
15 molded parts 22 of Figure 3 of Bosch-Siemens were ready for an
16 improvement which would enable the molded parts to better stabilize tall
17 items of cylindrical contour such as bottles. Sasaki and Figure 4 of Bosch-
18 Siemens disclose similar compartment dividers having angle brackets with
19 arcuate concave sides. (FF 6 and 12). The Examiner finds (*see* Ans. 9), and
20 the Appellants do not appear to contest, that one of ordinary skill in the art
21 would have recognized the concave profiles of the compartment dividers of
22 Sasaki and of Figure 4 of Bosch-Siemens as being capable of stabilizing
23 complementary shaped articles such as bottles. It would have been obvious
24 to apply the technique taught by Bosch-Siemens and Sasaki, namely,
25 providing arcuate concave surfaces for stabilizing bottles, to the sidewalls of

1 the molded parts of Figure 3 of Bosch-Siemens as modified in view of
2 Yamawaki.

3 Applying the known technique to Bosch-Siemens and Sasaki to the
4 molded parts of Figure 3 of Bosch-Siemens would have resulted in molded
5 parts or compartment dividers meeting, in combination with the receptacle
6 container 20, the limitations of claims 12 and 21. The Appellants provide no
7 evidence or reason why the application of the known technique would have
8 been beyond the level of ordinary skill in the art or would have produced
9 unpredictable results. That the technique was already at work in the molded
10 part depicted in Figure 4 of Bosch-Siemens does not imply that one of
11 ordinary skill in the art would not also have reason to apply the technique to
12 the molded part depicted in Figure 3 of that reference.

13 Yamawaki would not have taught away from the application of the
14 known technique to Bosch-Siemens and Sasaki to the molded parts of Figure
15 3 of Bosch-Siemens. Although Yamawaki discloses compartment dividers
16 with cylindrical bodies defining chambers, the Appellants do not point to
17 any teaching in Yamawaki criticizing or disparaging compartment dividers
18 having chambers with inwardly concave sidewalls. On the contrary,
19 Yamawaki discloses supporting tubes in hourglass shaped chambers having
20 concave inner side surfaces, albeit concave inner side surfaces on front and
21 back walls rather than on sidewalls. (FF 8 and 10).

22 CONCLUSIONS

24 The Appellants have not shown that the Examiner erred in concluding
25 that the subject matter of representative claim 9 would have been obvious
26 from the teachings of Bosch-Siemens and Yamawaki because Bosch-

Siemens teaches away from the combination proposed by the Examiner as support for the conclusion of obviousness. Therefore, the Appellants have not shown that the Examiner erred in rejecting claims 9-11, 14, 17, 19 and 20 under 35 U.S.C. § 103(a) as being unpatentable over Bosch-Siemens and Yamawaki.

The Appellants have not shown that the Examiner failed to articulate reasoning with some rational underpinning sufficient to support the conclusion that Bosch-Siemens, Yamawaki and Sasaki would have provided one of ordinary skill in the art reason to substitute sidewalls having concave shape bulging inwardly toward a chamber defined within the sidewalls for the planar sidewalls of the compartment divider of Bosch-Siemens.

The Appellants have not shown that the Examiner erred in concluding that the subject matter of representative claims 12 and 21 would have been obvious from the teachings of Bosch-Siemens, Yamawaki and Sasaki because Yamawaki teaches away from the combination proposed by the Examiner as support for the conclusion of obviousness. Therefore, the Appellants have not shown that the Examiner erred in rejecting claims 12 and 21 under § 103(a) as being unpatentable over Bosch-Siemens, Yamawaki and Sasaki.

DECISION

We AFFIRM the Examiner's decision rejecting claims 9-12, 14, 17 and 19-21.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a). *See* 37 C.F.R. § 1.136(a)(1)(iv) (2007).

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AFFIRMED

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14 BSH HOME APPLIANCES CORPORATION

15 INTELLECTUAL PROPERTY DEPARTMENT

16 100 BOSCH BOULEVARD

17 NEW BERN, NC 28562